

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions of claims in the application:

Listing of the Claims:

1. (Currently amended) A G0 transgenic chimera bird comprising:
an exogenous antibody gene with a replication-defective retrovirus vector ~~introduced~~
~~therein~~, wherein the retrovirus vector is a vector derived from Moloney murine leukemia virus,
wherein the G0 transgenic chimera bird produces an antibody derived from ~~a transgene~~
the exogenous antibody gene in at least one of blood, albumen, and egg yolk, and
wherein the G0 transgenic chimera bird is formed by a method comprising: incubating a
bird fertile egg, infecting an early embryo in the bird fertile egg after and exclusive of a
blastodermal period immediately after the spawning with the replication-defective retrovirus
vector, and then hatching the embryo.
2. (Original) The G0 transgenic chimera bird according to Claim 1, wherein a class of
a constant region of the antibody is human IgG.
3. (Original) The G0 transgenic chimera bird according to Claim 1, wherein a subclass
of a constant region of the antibody is human IgG1.
4. (Previously presented) The G0 transgenic chimera bird according to Claim 1,
wherein a constant region of the antibody is quail IgG, chicken IgG, or mouse IgG.
5. (Currently amended) The G0 transgenic chimera bird according to Claim 1, wherein
~~the antibody gene~~ either or both of the light chain gene or the heavy chain gene of the antibody is
controlled by a constitutive promoter.
6. (Original) The G0 transgenic chimera bird according to Claim 5, wherein the
constitutive promoter is chicken β -actin promoter.

7. (Cancelled)

8. (Cancelled)

9. (Previously presented) The G0 transgenic chimera bird according to Claim 1, wherein the bird is a chicken or quail.

10. (Previously presented) The G0 transgenic chimera bird according to Claim 1, wherein the antibody is a chimera antibody.

11. (Original) The G0 transgenic chimera bird according to Claim 10, which contains not less than 0.5 µg/ml of the antibody in blood.

12. (Original) The G0 transgenic chimera bird according to Claim 11, which contains not less than 5 µg/ml of the antibody in blood.

13. (Original) The G0 transgenic chimera bird according to Claim 10, which contains not less than 0.1 µg/ml of the antibody in albumen.

14. (Original) The G0 transgenic chimera bird according to Claim 13, which contains not less than 1 µg/ml of the antibody in albumen.

15. (Original) The G0 transgenic chimera bird according to Claim 10, which contains not less than 0.1 µg/ml of the antibody in egg yolk.

16. (Original) The G0 transgenic chimera bird according to Claim 15, which contains not less than 1 µg/ml of the antibody in egg yolk.

17. (Previously presented) The G0 transgenic chimera bird according to Claim 1, wherein the antibody is an scFv-Fc antibody.

18. (Original) The G0 transgenic chimera bird according to Claim 17, which contains not less than 20 µg/ml of the antibody in blood.

19. (Original) The G0 transgenic chimera bird according to Claim 18, which contains not less than 2000 µg/ml of the antibody in blood.

20. (Original) The G0 transgenic chimera bird according to Claim 17, which contains not less than 5 µg/ml of the antibody in albumen.

21. (Original) The G0 transgenic chimera bird according to Claim 20, which contains not less than 500 µg/ml of the antibody in albumen.

22. (Original) The G0 transgenic chimera bird according to Claim 17, which contains not less than 5 µg/ml of the antibody in egg yolk.

23. (Original) The G0 transgenic chimera bird according to Claim 22, which contains not less than 500 µg/ml of the antibody in egg yolk.

24. (Previously presented) A production method of an antibody which comprises producing the G0 transgenic chimera bird according to Claim 1, and recovering the antibody from blood and/or an egg of said G0 transgenic chimera bird.

25. (Previously presented) A production method of a G0 transgenic chimera bird which comprises incubating a bird fertile egg, infecting an early embryo after and exclusive of a blastodermal period immediately after the spawning with a replication-defective retrovirus vector, and then hatching the embryo, wherein the retrovirus vector is a vector derived from Moloney murine leukemia virus.

26. (Previously presented) The production method of a G0 transgenic chimera bird according to Claim 25, wherein infecting an early embryo is done after the lapse of 24 hours or more from the start of the incubation with a replication-defective retrovirus vector.

27. (Previously presented) The production method of a G0 transgenic chimera bird according to Claim 25, wherein the replication-defective retrovirus vector is microinjected to a heart or blood vessel formed in the early embryo.

28. (Previously presented) The production method of a G0 transgenic chimera bird according to Claim 25, wherein the replication-defective retrovirus vector is microinjected to a heart or blood vessel formed in the early embryo after the lapse of 24 hours or more from the start of the incubation.

29. (Previously presented) The production method of a G0 transgenic chimera bird according to Claim 25, wherein the replication-defective retrovirus vector having a titer of not less than 1×10^7 cfu/ml is microinjected.

30. (Previously presented) The production method of a G0 transgenic chimera bird according to Claim 29, wherein the replication-defective retrovirus vector having [[the]] a titer of not less than 1×10^8 cfu/ml is microinjected.

31. (Previously presented) The production method of a G0 transgenic chimera bird according to Claim 30, wherein the replication-defective retrovirus vector having [[the]] a titer of not less than 1×10^9 cfu/ml is microinjected.

32. (Canceled)

33. (Previously presented) The production method of a G0 transgenic chimera bird according to Claim 25, wherein the retrovirus vector is a VSV-G pseudo type one.

34. (Previously presented) The production method of a G0 transgenic chimera bird according to Claim 25, wherein the bird is a chicken or quail.

35. (Previously presented) The production method of a G0 transgenic chimera bird according to Claim 25, wherein a gene sequence not derived from a retrovirus is contained in a transgene incorporated into a replication-defective retrovirus vector.

36. (Original) The production method of a G0 transgenic chimera bird according to Claim 35, wherein the gene sequence not derived from a retrovirus is a gene sequence controlled by chicken β -actin promoter.

37. (Previously presented) The production method of a G0 transgenic chimera bird according to Claim 35, wherein the gene sequence not derived from a retrovirus is a gene sequence coding for an antibody gene.

38. (Original) The production method of a G0 transgenic chimera bird according to Claim 37, wherein the antibody gene is a chimera antibody gene.

39. (Original) The production method of a G0 transgenic chimera bird according to Claim 37, wherein the antibody gene is an scFv-Fc antibody gene.

40. (Previously presented) The production method of a G0 transgenic chimera bird according to Claim 35, wherein the gene sequence not derived from a retrovirus is a gene sequence coding for a fusion protein gene.

41. (Cancelled)

42. (Currently amended) A production method of a transgenic bird, which comprises mating a first G0 transgenic chimera bird produced by the method according to Claim 25 with an ~~allogeneic~~ allogenic bird, and then hatching the egg.

43. (Currently amended) The production method of a transgenic bird according to Claim 42, wherein the ~~allogeneic~~ allogenic bird is another G0 transgenic bird produced by the method according to Claim 25 or an offspring thereof.

44. (Currently amended) A G1 transgenic bird, which is obtainable by mating a G0 transgenic bird produced by the method according to Claim 25 with an ~~allogenic~~ allogenic bird, and then hatching the egg.

45. (Currently amended) The G1 transgenic bird according to Claim 44, wherein the ~~allogenic~~ allogenic bird is another G0 transgenic bird produced by the method according to Claim 25 or an offspring thereof.

46. (Previously presented) A production method of a transgenic bird, which comprises further mating the G1 transgenic bird according to Claim 44, and then hatching the egg.

47. (Previously presented) A G2 transgenic bird or an offspring thereof, which is obtainable by further mating the G1 transgenic bird according to Claim 44, and then hatching the egg.

48. (Previously presented) A production method of a protein, which comprises extracting the objective protein from a somatic cell, blood or an egg of the transgenic bird produced by the method according to Claim 42.

49. (Currently amended) An egg laid by the G0 transgenic chimera bird according to Claim 41 1, which contains not less than 1 mg of a heterogeneous protein derived from a transgene.

50. (Currently amended) An egg laid by the G0 transgenic chimera bird according to Claim 41 1, which contains not less than 20 mg of a heterogeneous protein derived from a transgene.

51. (Currently amended) An egg laid by the G0 transgenic chimera bird according to Claim 41 1, which contains not less than 100 mg of a heterogeneous protein derived from a transgene.

52. (Currently amended) An egg laid by the G0 transgenic chimera bird according to Claim 44 1, which contains not less than 200 mg of a heterogeneous protein derived from a transgene.

53. (Previously presented) An egg laid by the G1 transgenic chimera bird according to Claim 44 or an offspring thereof, which contains not less than 1 mg of a heterogeneous protein derived from a transgene.

54. (Previously presented) An egg laid by the G1 transgenic bird according to Claim 44 or an offspring thereof, which contains not less than 20 mg of a heterogeneous protein derived from a transgene.

55. (Previously presented) An egg laid by the G1 transgenic bird according to Claim 44 or an offspring thereof, which contains not less than 100 mg of a heterogeneous protein derived from a transgene.

56. (Previously presented) An egg laid by the G1 transgenic bird according to Claim 44 or an offspring thereof, which contains not less than 200 mg of a heterogeneous protein derived from a transgene.

57. (Cancelled)

58. (Cancelled)

59. (Cancelled)